## AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

### Listing of Claims

1. (Previously Presented) An electrode structure for attachment to a more extensive measuring structure, in order to measure electrical responses from the human body, the electrode structure comprising:

a inner surface to contact with a measurement subject;

an outer surface opposed a predetermined distance to the inner surface;

a peripheral surface connecting the inner surface and the outer surface;

a central opening in the inner surface extending through the outer surface;

an opening in the peripheral surface extending though the electrode structure to meet the central opening; and

an electrode fitted in the opening in the peripheral surface, the electrode having a measuring lead, an electrode pellet and a conductor connecting the measuring lead and the electrode pellet, an end of the electrode pellet being positioned where the opening in peripheral surface meets the central opening and a portion of the measuring lead extending beyond the peripheral surface.

2. (Previously Presented) The electrode structure according to Claim 1, wherein the electrode is formed from silver/silver-chloride (Ag-AgCI), in order to form electrically stable interfaces between the measurement subject and the measuring electronics.

3. (Previously Presented) The electrode structure according to Claim 1, wherein a thickness of the electrode structure anywhere between the inner surface and the outer surface is less than 5mm.

4. (Previously Presented) The electrode structure according to Claim 1, wherein the outer surface is configured to receive a locking piece and the electrode structure attaches to the more extensive measuring structure via the locking piece.

5. (Previously Presented) The electrode structure according to Claim 2, wherein the conductor connecting the measuring lead and the electrode pellet is made of pure silver (Ag).

6. (Previously Presented) The electrode structure according to Claim 1, wherein a diameter of the central opening is in a range of between 2 mm and 4 mm.

7. (Previously Presented) The electrode structure according to Claim 1, wherein the electrode pellet is cylindrical in shape and an axial direction in which the electrode pellet extends is essentially parallel to a plane of a subject being measured.

8. (Previously Presented) The electrode structure according to Claim 4, wherein the outer surface has a curved opening and the locking piece locks into the curved opening.

9. (Previously Presented) The electrode structure according to Claim 7, wherein the electrode pellet has a cross-section along any plane perpendicular to the axial direction in which the electrode pellet extends with a surface area that is less than 15 $mm^2$.

10. (Previously Presented) The electrode structure according to Claim 1, wherein the electrode pellet is a sintered silver/silver-chloride mass (Ag-AgCl).

11. (Canceled)

12. (Currently Amended) A measuring cap for measuring electrical responses from the human body, which measuring cap comprises:

a cap configured to be place upon a human head; and

one or more electrode structures according to claim 1 attached to the cap, wherein the measuring leads of the one or more electrode structures transmit measurement results to measuring equipment attached to the measuring leads.

13. (Previously Presented) The measuring cap according to Claim 12, wherein

the measuring leads are wound into a tight spiral bundle, in order to reduce interference.

14. (Previously Presented) The measuring cap according to Claim 12, wherein the measuring leads include ground and reference electrode leads that are wound tightly to each other to reduce interference.

15. (Previously Presented) The measuring cap according to Claim 12, wherein the measuring leads run from the electrode structures towards a front of the cap to reduce interference.

Claim 16 (Canceled).

17. (Previously Presented) The electrode structure according to Claim 2, wherein a thickness of the electrode structure anywhere between the inner surface and the outer surface is less than 5mm.

18. (Previously Presented) The electrode structure according to Claim 3, wherein the thickness of the electrode structure anywhere between the inner surface and the outer surface is less than 2 mm.

19. (Previously Presented) The electrode structure according to Claim 9, wherein the cross-section of the electrode pellet is less than 4 $mm^2$.